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(71) Applicant *(for all designated States except US)*: **KOREA RESEARCH INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY** [KR/KR]; 52 Eoeun-dong, Yuseong-gu, Daejeon 305-806 (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **LIU, Jang-Ryol** [KR/KR]; 11-201 Gyosoo Apt. KAIST, Gajeong-dong, Yuseong-gu, Daejeon 305-350 (KR). **JEONG, Won-joong** [KR/KR]; 125-705 HANVIT Apt., Eoeun-dong, Yuseong-gu, Daejeon 305-755 (KR). **MIN, Sung-ran** [KR/KR]; 132-403 HANVIT Apt., Eoeun-dong, Yuseong-gu, Daejeon 305-755 (KR). **JEONG, Seok-won** [KR/KR]; 304ho, 146-13, Shinseong-dong, Yuseong-gu, Daejeon 305-345 (KR). **HAN, Su-kyoung** [KR/KR]; 111-2002 Beodeunae Apt., Taepyeong 2-dong, Joong-gu, Daejeon 301-780 (KR).

(74) Agent: **KIM, Won-joon**; 305 Soohyub Bldg., 917 Dunsan-dong, Seo-gu, Daejeon 302-828 (KR).

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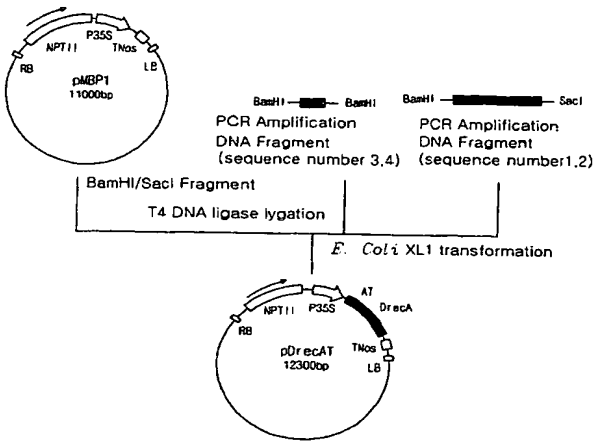
(54) Title: METHOD FOR RECOMBINATING PLASTID USING PROCARYOTIC RECOMBINASE GENE



(57) Abstract: The objective of this invention is to enhance the efficiency of plastid transformation using nuclear transformed plants in which the microbial recombinase A(*recA*) is to target to (or expressed in) the plastid. This invention will be better explained by the following detailed descriptions. A plant is transformed with a nuclear transformation vector containing the microbial *recA* gene added with a plastid targeting sequence. In this nuclear transformed plant, the frequency of plastid transformation is enhanced greater than two-folds due to increased homologous recombination between the plastid transformation vector carrying genes of interest (or target genes) and the plastid genome. In addition, because plastid transformation is accomplished through a gradual process, adventitious shoots selected after being subjected to plastid transformation should be cut into explants, and then shoots regenerated from the explants are to be reselected until all of the plastids in the shoots are uniformly transformed. However, when the nuclear transformed plant is used, the number of reselection is reduced to 1/2 to 1/3 due to increased homologous recombination.

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